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Ilene Munk Gaekwad
Direct Dial: (503) 477-8660
imunk@foleymansfield.com

Ms. Lori Cora
Assistant Regional Counsel
EPA Region 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

Mr. Gary Vrooman
Assistant Attorney General
Oregon Department of Justice
1515 SW Fifth Avenue, Ste. 410
Portland, OR 97201

Re: Reply to NWN's response to Siltronic's request for Written Determination Regarding Proper Classification and Handling of Waste from Portland Gas & Coke facility
CERCLA Docket No. 10-2009-0255

Dear Ms. Cora and Mr. Vrooman:

I write on behalf of Siltronic Corp. to reply to NW Natural's ("NWN") January 22, 2016 response letter ("NWN's letter") to Siltronic's December 11, 2015 ("Siltronic's letter") request for written determination regarding proper classification and handling of waste generated during remediation of the sediments, riverbanks, and upland areas containing waste from NWN's operation and that of its predecessor, Portland Gas & Coke ("PG&C"). This remediation will occur in accordance with several Orders and Agreements either in place or being negotiated currently between Siltronic, NWN, EPA, and DEQ. [1]

[1] There are currently two Administrative Orders related to sediments along the riverbank off NWN's property: (1) US EPA Region 10 CERCLA Docket No. 10-2004-0068, Administrative Order on Consent for Removal Action ("2004 EPA Tar Body Removal Order") and (2) US EPA Region 10 CERCLA Docket No. 10-2009-0255, Administrative Settlement Agreement and Order on Consent for Removal Action ("2009 EPA Joint Order"). The 2009 EPA Joint Order is a Consent Order for which both Siltronic and NWN are signatories. In addition, NWN and Siltronic are joint parties to an Administrative Order in the uplands area for source control on NWN and Siltronic property. (DEQ Order No. ECVC-NWR-00-27, Order Requiring Remedial Investigation and Source Control Measures ("2000 DEQ Joint Upland Source Control Order").) In addition, DEQ has entered into Orders with both NWN and Siltronic separately. NWN's Order is DEQ No. WMCVC-NWR-94-13, Voluntary Agreement for Remedial Investigation/Feasibility Study ("1994 DEQ Voluntary Order"), which has been amended. Siltronic's Consent Order is DEQ Order No. VC-NWR-03-16, Order Requiring Remedial Investigation and Source Control Measures ("2004 DEQ TCE Order"). Within the TCE Order, Siltronic undertook an *in-situ* bio-remediation action effectively removing over 98% of accidental releases of trichloroethylene (TCE), a chemical used for several years by Siltronic, but which has been discontinued and replaced by more sustainable methods. *See*, Memorandum dated June 10, 2015, from James Peale at Maul Foster Alongi, to Keith Johnson and Dana Bayuk

Siltronic is concerned that hazardous substances requiring remediation from former PG&C activities are managed differently when generated during in-river remediation[2] activities compared to hazardous substances when generated during uplands remediation activities, which DEQ allows NWN to treat as "used oil" according to DEQ policy and exempts from state solid waste and apparently hazardous waste rules.[3] Siltronic seeks to avoid creation of another Superfund site through mismanagement of wastes generated during remediation and as such seeks written clarification from EPA and DEQ prior to commencement of remediation.

Siltronic acknowledges trichloroethylene (TCE) use during a several-year period in the early days of operations at Siltronic. During that time accidental spills and incidents did release TCE. Despite uncertainly regarding whether the TCE was "spent" or used prior to release DEQ has determined all TCE is to be treated as F002 listed waste.[4]

Siltronic finds it arbitrary, from both a legal and policy perspective, that EPA and DEQ would accept NWN's characterization of PG&C waste as all "non-hazardous MGP waste," in spite of clear information to the contrary, while at the same time, insist that trichloroethylene (TCE) accidentally released by Siltronic in the early 1980s be classified as listed hazardous waste in the absence of clear evidence the TCE released should be treated as "listed" and not "characteristic" hazardous waste. This is not an issue of necessity to achieve environmental compliance. Siltronic has a strong track record of proactive remediation of TCE waste, and clear indication of positive environmental performance as demonstrated by the 42 environmental awards the Portland plant has received in the past 25 years, a copy of which is attached as Exhibit B. Siltronic seeks consistent application of regulatory principals among neighboring corporations. If DEQ and EPA agree with NWN that sufficient uncertainty exists with regard to waste generated from PG&C operation, and will thus classify all MGP waste as characteristic waste only, (if applicable with regulations), then Siltronic seeks, in the alternative, re-evaluation of TCE at Siltronic consistent with the National Contingency Plan (NCP) requirement that any uncertainty regarding generation requires waste to be treated as characteristic and not listed waste and reclassify the TCE releases from Siltronic as D040 characteristic hazardous waste and not F002 listed hazardous waste.

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at Oregon DEQ, Re: "Source Area CVOC Reduction Progress Report – Siltronic (ECSI 183)," attached as Exhibit A

[2] EPA has determined heavily concentrated PAHs and other "principal threat waste," which NWN euphemistically calls "substantial product," will be disposed as "special waste" in a hazardous waste landfill consistent with EPA's off-site rule. 42 U.S.C. § 9621(d)(3).

[3] See NWN's January 22, 2016, letter at page 8.

[4] F002 is referenced in the February 23, 2004, Memorandum from DEQ regarding Wacker Siltronic Question, attached as Exhibit C.

ISSUES

To facilitate your respective responses to our request for written determination, we propose the following specific questions to which we hope you will provide detailed, specific answers:

A. Portland Gas & Coke Waste

1. Do EPA and DEQ agree, that waste from the former PG&C facility contains only manufactured gas plant (MGP) waste?

2. Do EPA and DEQ accept NWN's claim that MGP waste is not hazardous waste, under state and federal law?

3. Do EPA and DEQ have identical requirements for management and disposal of that waste?

   a. If DEQ and EPA regulatory requirements related to management of waste from MGP activities are different, are State standards "more stringent" than federal requirements?

4. If EPA and DEQ conclude PG&C was involved in petroleum refining, coking and chemical manufacturing including solvents and pesticide production and formulation, are wastes from those activities "listed" or "characteristic"[5] wastes when generated during remediation?

5. What impact, if any, does Oregon's specific inclusion of "petroleum" within the definition of hazardous substance have on this analysis?

6. In light of the uncertainty surrounding the sources and origins of TCE discovered on Siltronic's property and the consistency requirements of the National Contingency Plan, NCP,[6] if DEQ and EPA won't classify waste from coking, refining, and chemical production plants at PG&C as "listed" waste when generated during remediation due to uncertainty regarding the process which generated the waste, will EPA and DEQ re-classify TCE as characteristic waste, as a result of similar uncertainty, to avoid inconsistent application of the NCP?[7]

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[5] Listed and characteristic wastes are two types of "hazardous wastes" pursuant to RCRA, the Resource Conservation and Recovery Act. 42 U.S.C. § 9601 et. seq., and the regulations at 40 C.F.R. pt. 261.

[6] 40 C.F.R. pt. 300.

[7] This would include a determination TCE is characteristic D040 waste rather than F002 listed waste.

BACKGROUND

The unifying theme of the discussion that follows in the remainder of this letter is the need for consistent regulatory interpretation and application by EPA and DEQ. This section provides some background to frame the discussion. It will be followed by a rebuttal of assertions made by NWN in its January 22, 2016 response letter. We will then provide an analysis of the consistency problem as it pertains to both PG&C waste and Siltronic's TCE waste.

In its January 22, 2016 letter, NWN details its management of waste materials from past operations of PG&C which NWN refers to as "Gasco." The Gasco site comprises not only the property NWN currently owns at 7900 NW St. Helens Road, but also approximately 45-acres (more than half of the current Siltronic property) located at 7200 NW Front Avenue, Portland, Oregon. Waste materials including, but not limited to, spent oxide wood chips, waste water, petroleum contaminated heavy tarry waste known as DNAPL (dense non-aqueous phase liquids), have accumulated in soils, the subsurface, contaminated groundwater and river sediments.

Both EPA and DEQ have determined that releases from Gasco are CERCLA hazardous substances that have created an imminent and substantial endangerment to human health and the environment.[8] However, arguments asserted by NWN in its January 22, 2016 letter, claim that these substances do not constitute hazardous wastes pursuant to RCRA for the purposes of remediation. Hence the immediate confrontation of the consistency question: How can hazardous substances which have created an imminent and substantial endangerment to human health and the environment – to the extent that state and federal regulators have, in response, issued no less than four Administrative Orders – be treated as non-hazardous waste when handled and disposed of during remediation?

Siltronic fears creation of another Superfund site if wastes are treated as non-hazardous and landfilled in a sanitary landfill, burned as marine fuel, or "recycled" without regulatory oversight. This regulatory loophole, specifically regarding upland areas under DEQ authority, seems inconsistent with regulatory requirements in States with authorized RCRA programs. EPA's understanding of the situation, prior to Siltronic's December 11, 2015 request for written clarification, allows PG&C waste DNAPL present in-river sediments to be transported off-site and disposed as a "special waste" at a permitted hazardous waste landfill. On the other hand, that very same DNAPL, when extracted from groundwater in the uplands, is sent by NWN to Thermo Fluids, Inc. of Portland as non-hazardous waste, and not solid waste, for blending into marine fuel. EPA regulations effective July 2015 now prohibit such "sham recycling."[9] Yet, Oregon has not yet adopted the federal regulations and is contemplating grandfathering in all existing exemptions, such as an exemption from treating petroleum releases as hazardous waste. The implications of a continuing state regulatory loophole for public health and the environment are profound. Siltronic does acknowledge that any PG&C waste which contains detectible

[8] See findings of fact for EPA Orders 10-2009-0255 and prior EPA Order CERCLA docket 10-2004-0068, as well as DEQ Orders NWR-94-13 and NWR-00-27.

[9] 80 Fed. Reg. 1694 effective July 2015.

concentrations of TCE is managed as a listed hazardous waste because of the presence of TCE. For this subset of wastes, it is the right environmental result, but for the wrong reason. The TCE isn't the harm – at barely detectable levels, it is the PG&C waste.

EPA has jurisdiction over in-river remedies and DEQ has been supervising uplands activities. Supervision of riverbanks is somewhat less certain. Unfortunately, because NWN believes waste from PG&C's historic manufacturing operations is non-hazardous, they treat their waste differently than Siltronic manages that same waste.[10] Siltronic has determined based upon evaluation of available information such as was submitted in our original letter to EPA on December 11, 2015, that PG&C wastes including DNAPL are, "Petroleum refinery primary oil/water/solids separation sludge" and as such manifest such waste with waste code F037 in addition to any other applicable waste codes. Attached as Exhibit D are a copies of the Uniform Hazardous Waste Manifest tracking numbers 000966600VES and 000966602VES dated May 5, 2015 evidencing Siltronic's practice in this regard.

DEQ's position has been that the generator of the waste makes their own hazardous waste determination.[11] Such a determination leaves the same PG&C DNAPL an F037 listed waste when encountered by Siltronic, but NWN treats that same waste as presumptively F002 waste, or non-hazardous, non-solid waste "used oil" eligible for blending and burning as marine fuel. The only difference being the name of the company encountering the DNAPL. The division between EPA and DEQ creates a similar disconnect if the two agencies do not resolve regulatory loopholes to ensure consistent treatment of the same waste, whether it is located in river sediments or in the uplands, regardless of the name of the company encountering the waste.

The distinct possibility that improper waste management resulting from inconsistent regulatory interpretation could lead to the creation of another Superfund site, requires that Siltronic obtain clear written direction from the agencies as to how these wastes should be managed. As such, Siltronic requests that EPA and DEQ provide clarity on this important issue prior to the commencement of significant remedial action and help Siltronic understand how these wastes are to be managed when encountered in uplands areas, or in river sediments.

FACTS CONCERNING HISTORIC PG&C WASTE

With the foregoing discussion in mind, I would like to turn to NWN's January 22, 2016 letter, and rebut some of the claims made by NWN regarding the historic operations of its predecessor PG&C.

NWN claims that the revelations made by Siltronic in our December 11, 2015 letter to the effect that PG&C operated one of the largest chemical plants in the Pacific Northwest, – including a

[10] Siltronic manages PG&C waste on Siltronic as F037 listed waste.

[11] Letter from DEQ to NWN regarding Management of Water Treatment System Residuals and Extraction Well PW-2L Dense Non-Aqueous Phase Liquids – NW Natural "Gasco Site" and the Northern Portion for the Siltronic Corporation Facility, Portland Oregon, ECSI Nos. 84 and 183, dated September 4, 2014, attached as Exhibit F.

refinery producing gasoline and other light oil products such as benzol and toluene, a separate plant manufacturing coke for the aluminum industry, and plants manufacturing pesticides for sale in the marketplace – "present no new information about Gasco." NWN insists that these products were all "byproducts of manufactured gas." Furthermore, NWN asserts that because of the information it included in its CERCLA Section 104(e) responses, EPA and DEQ have been well aware of these operations in reaching their respective conclusions that wastes from PG&C are non-hazardous.

Historical PG&C documentation of this plant's actual activities seem to suggest Portland Gas and **Coke,** (emphasis added) PG&C, was anything but a run of the mill MGP plant. Attached as Exhibit E is the January 27, 2016 letter to Ms. Lori Cora enclosing a copy of a report by Trillium, Inc., forensic chemists, regarding PG&C plant dated January 21, 2016 ("Trillium Report, Exh. E"). Trillium reviewed the historical documents related to PG&C operation. The Trillium Report concludes:

> The PG&C gas plant 'is unusual in that it simultaneously produces chemical co-products of gasification that account for 35% of the total operating income.' This was accomplished by adding a refinery, a tar distillation plant, a lampblack/briquette processing plant and coke ovens *as separate operating units*.
> Trillium Report, Exh. E at p. 4, emphasis added.

The experts conclude, "Comparing the Portland Gas and Coke Plant at Linnton, Oregon to other manufactured gas plants (MGPs) in the United States, the Portland Gas and Coke Plant was a unique operation." Trillium Report, Exh. E at p. 9. PG&C's own management highlight the separate construction of a chemical plant in 1941, at a cost of 1.5 million dollars to include the same raw material (heavy oil), but produce entirely new products; "toluol, xylol, and solvent napthas …The hydro-carbons in this group are among the most versatile substances in the vast field of industrial chemistry … ." Gas Company to Build Basic Chemical Plant at a Cost of $1,500,000, The Oregonian, April 3, 1941, at 1, 6, attached as Exhibit G.

Siltronic's December 11, 2015 letter, aimed to establish conclusively that Gasco wastes are listed hazardous wastes when generated during remediation. The constituents of the particular waste streams from PG&C's historic refining, chemical manufacturing, and coking operations are specifically hazardous wastes due to the generation of toxic constituents from those manufacturing processes.[12] The purpose was to explain that the historic operations at the Gasco site were separate and distinct from MGP operations, in order to establish that the wastes generated by these operations should properly be classified as RCRA listed hazardous wastes when generated during remediation.

Exhibit 5, pages 6 through 10 of Siltronic's December 11, 2015 letter, contains reproduced excerpts from a special September 17, 1955 "Buyer's Guide" issue of "Chemical Week"

[12] 40 C.F.R. § 261.31(2010).

magazine, in which PG&C clearly held itself out as a commercial producer of solvent benzol, benzene, naphthalene, and toluol.

As such, Siltronic believes that the information from publicly available historic sources in the December 11, 2015 letter to EPA presents substantial new information that was not included in either NWN's CERCLA Section 104(e) response nor the Consent Orders. In response to Question 20 of their 104(e) response, for example, NWN omits the fact that PG&C Co. constructed a completely separate light oil refinery in 1923. The 104(e) response merely states, "In 1923, the company began marketing benzol as an additive to increase motor fuel efficiency, and sold it for the manufacture of synthetic rubber during World War II." (P. 73.) Similarly, the response to Question 21 of the 104(e) response does not mention the construction of a new, separate light oil refinery: it simply states, "In 1923, a process for the refining of benzol from the gas stream commenced." (P. 80) This latter statement could easily mislead a reader into thinking that the process was merely an adjustment to existing operation and infrastructure.

NWN's 104(e) response provides similarly skimpy information regarding the four Knowles coke ovens PG&C constructed in 1941. The Question 20 response merely states, "In 1941, PG&C added four oil coking ovens for reforming gas and producing metallurgical coke." (P. 74.) The Question 21 response states only, "PG&C installed four Knowles Coke ovens in 1941. The ovens produced approximately 14,000 tons of coke per year." Siltronic's December 11, 2015 letter, along with the 1945 aerial photograph and 1948 site plan, provide much more detail on the location of the coke ovens and their operations, as does the Trillium expert report.

EPA was correct in focusing on the 1946 flow diagram's demonstration of heavy fuel oil as a direct input into the four Knowles coke ovens. NWN attempts to characterize the coke ovens as just another means of producing manufactured gas, with coke as another "high value byproduct." (NWN January 22, 2016 letter, p. 4.) On the contrary, Siltronic's December 11, 2015 letter, and the Trillium expert report both establish that the coke ovens were installed specifically to produce coke as a primary product for the developing aluminum industry in the Pacific Northwest at the time, and the gas was a by-product of the coke production, not the other way around.

Indeed, the 1940 annual report provided by NWN itself supports Siltronic's contention. The annual report describes the research and investigation that led to PG&C's decision to construct the coke ovens. Specifically, at page 6 the report relates:

> Practical demonstration was made of the feasibility of manufacturing coke from petroleum residues that would satisfy the requirements of the aluminum and other metallurgical industries. Such practical demonstration further indicated that the Company could at the same time achieve the desired increase in its production of other by-products and increase its daily gas manufacturing capacity by 6,000,000 cubic feet.

The foregoing paragraph notes increase in gas production as clearly a subordinate and ancillary benefit to the production of coke.

Similarly, the 1952 article by Kohlhoff & Hull, cited by Trillium, Inc., in its expert report thoroughly[13] describes gas production as a byproduct of coke production. Trillium Report, Exh. E. Figure 3 from that report, reproduced below, provides a graphic representation of gas production as a byproduct of coke production:

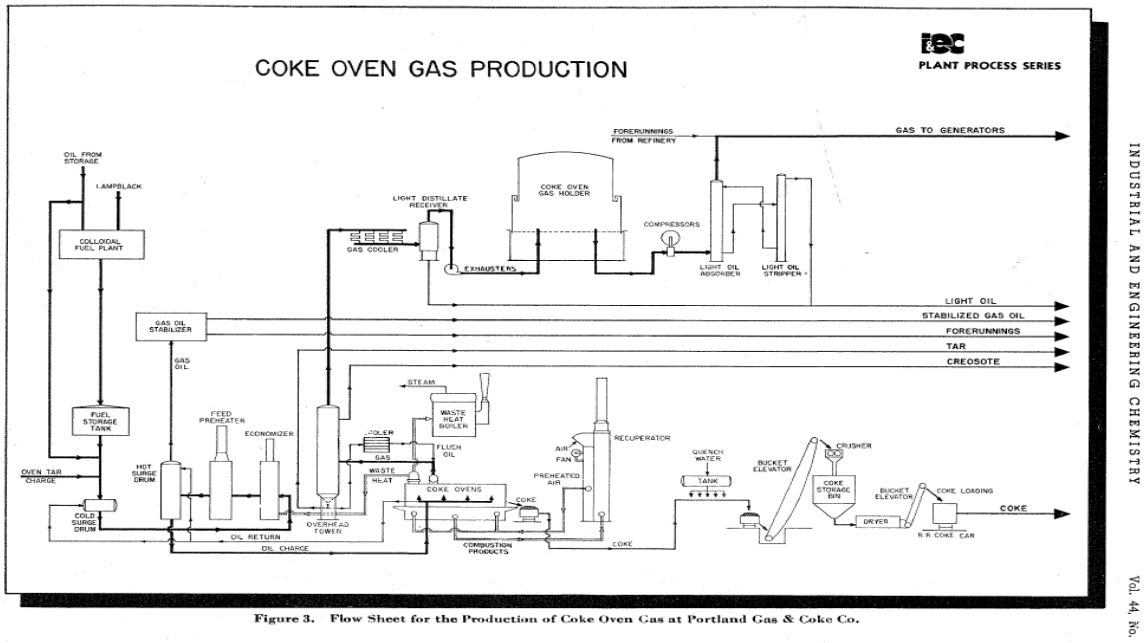

Figure 3. Flow Sheet for the Production of Coke Oven Gas at Portland Gas & Coke Co.

One of the experts at Trillium Inc. with many years of experience in the petroleum industry, reports that the four Knowles coking ovens, "with auxiliary and refining equipment"[14] in 1941 had nothing to do with MGP. According to PG&C's Board of Directors, this addition was a basic chemical plant[15] and thus, not an MGP.

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[13] NW Natural cites three EPA publications to substantiate its arguments about the operations of PG&C: "Survey of Town Gas and By-Product Production and Locations in the U.S. (1880-1950)" (1985); "U.S. Production of Manufactured Gases: Assessment of Past Disposal Practices" (1988); and "A Resource for MGP Site Characterization and Remediation" (2000). The generalized discussions in these publications are irrelevant to the operations of PG&C, the specifics of which are instead described in the Hall and Kohlhoff & Hull articles cited in the Trillium report. The latter articles were written by actual experts and employees of PG&C.

[14] NWN's January 22, 2016 letter, attachment 2.

[15] *Gas Company to Build Basic Chemical Plant at Cost of $1,500,000*, The Oregonian April 3, 1946, at p.6; *Gas Company to Add Plant*, The Oregonian, April 3, 1941, at p. 1 attached as Exhibit G.

Moreover, the construction of the coke ovens wasn't necessary to meet capacity requirements for gas. In 1941, the additional gas manufacturing capacity of 6,000,000 cubic feet per day from the coke plant added only 17% to the already 29,000,000 cubic feet per day capacity of the MGP.[16] The average daily demand for gas from PG&C in 1940 was about 10,400,000 cubic feet per day, about a third of capacity.[17] The MGP increased gas capacity in 1946 by adding two larger gas generators and increased the efficiency of the existing generators that "will more than double the plant's gas production capacity."[18][19] After these additions and improvements to the MGP, the gas capacity of the MGP's 14 gas generators was 54,000,000 cubic feet per day.[20] The average demand for gas in 1950 was 26,000,000 cubic feet per day.[21] Thus, the coke plant gas was not needed to meet the average demand for gas.

NWN's arguments that remediation wastes can only be sourced to manufactured gas production are therefore inaccurate and misleading.[22] All PG&C or Gasco products may have had similar feedstock – or inputs – but to say all wastes are by-products of operation is not supported by the historical records.

ANALYSIS

Having reinforced the factual basis for Siltronic's argument that PG&C's waste is hazardous waste, let me turn to specific legal points pertaining to PG&C hazardous waste. This section also contains legal and policy points regarding Siltronic's TCE waste.

1. Manufactured Gas Waste Is One Of Several Distinct Waste Streams Generated By Portland Gas & Coke, NWN's Predecessor. Other Wastes Include Coking Waste, Refining Waste And Chemical Production Waste.

First, as demonstrated by Siltronic's December 11 letter, and Trillium's expert report, PG&C's facility was not just an MGP plant; it was a chemical manufacturing plant and refinery, and the

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[16] *Early Day History The Gas Light Era,* The Oregonian, March 18, 1954, attached as Exhibit H.

[17] NWN's January 22, 2016 letter, attachment 2.

[18] PG&C Annual Report at p. 9 (1946), attached as Exhibit I.

[19] GASCO Works Tax Lot 42 Map shows Generator Building #1 with 12 gas generators and Generator Building #2 with two larger gas generators (Jan. 22, 1948), attached as Exhibit J.

[20] *Early Day History The Gas Light Era,* The Oregonian, March 18, 1954, attached as Exhibit H.

[21] EPA-600/7-85-004, Survey of Town Gas and By-Product Production and Locations in the U.S. (1880-1950), Radian Corporation at p. B-315 (Feb. 1985).

[22] We do, however, appreciate NWN's concurrence that MGP wastes are in fact solid wastes, which makes the subsequent analysis much more straightforward for all parties concerned.

MGP portion of the site covered less than half of the PG&C property. Attached as Exhibit J is a copy of PG&C's Gasco Works Tract Tax Lot 42 map showing the relative extents of gas manufacturing and chemical refining. The red outlined areas are reportedly related to the manufacture of gas. The other areas were other production plants using the same heavy crude feedstock.

Second, NWN's January 22, 2016, letter partially cites 40 C.F.R. § 261.24(a) (2006) for the proposition that MGP waste is excluded as a hazardous waste. However, the full text of this citation reads:

> (a) A solid waste (except manufactured gas plant waste) exhibits the characteristic of toxicity if, using the Toxicity Characteristic Leaching Procedure, test Method 1311 in the 'Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,' EPA Publication SW-846, as incorporated by reference in §260.11 of this chapter, the extract from a representative sample of the waste contains any of the contaminants listed in table 1 at the concentration equal to or greater than the respective value given in that table.

As alluded to by the October 19, 2000 opinion letter,[23] next cited by NWN, the parenthetical statement of MGP exclusion 40 C.F.R. § 261.24(a) relates to the 2000 case *Ass'n of Battery Recyclers, Inc. v. EPA*, 208 F.3d 1047 (D.C. Cir. 2000). That case, however, did not provide a blanket exclusion of MGP waste from the toxicity characteristic. Rather it struck down a rulemaking that included MGP waste as subject to TCLP test because EPA had not developed a sufficient record to prove MGP waste was routinely disposed in solid waste landfills, necessitating application of the Toxicity Characteristic Leaching Procedure, (TCLP) test to determine that MGP waste toxicity. It did not support the proposition that manufactured gas plant waste is not hazardous. The Court said:

> As we have said, the EPA must show that the mismanagement scenario the TCLP simulates bears 'some rational relationship' to how wastes subject to the test are actually managed…Here, the EPA has demonstrated the possibility that MGP wastes from remediation sites could be disposed of in a municipal landfill, but has not produced a shred of evidence indicating that has happened or is likely to happen. *Upon the current record*, therefore, we must conclude that the EPA has not justified its application of the TCLP to MGP waste.

Id., at 1064 (internal citations omitted, emphasis added). If the EPA had done a more thorough job providing evidence that MGP waste is discarded in municipal landfills, the proposed rule

[23] Agency opinion letters are entitled to no deference. *Christensen v. Harris County*, 529 U.S. 576, 586 (2000); 120 S. Ct. 1655; 146 L.Ed. 621.

would likely have been sustained. Ironically, PG&C waste, including waste from MGP production may be disposed in non-hazardous (Subtitle D) landfills if DEQ classifies this waste as non-hazardous in the uplands areas. Of course, that would mean DEQ had decided the existence of RCRA Appendix VIII hazardous constituents in PG&C waste is not cause for concern, in spite of two CERCLA Administrative Orders, which suggest otherwise.

2. Legal And Scientific Understanding Of The Environmental Risks Posed By Petroleum Processing Activities Have Evolved Since Congress Re-Authorized RCRA In The Mid-1980s.

Congress added a provision to the statute governing hazardous waste regulation when it re-authorized RCRA in the mid-1980's. Within 42 U.S.C. § 6924(q)(1), Congress required EPA to establish standards applicable to the owners and operators of facilities which produce a fuel from hazardous waste or distribute, market or burn such fuel "as may be necessary to protect human health and the environment." When EPA attempted to exclude from RCRA regulation the gasification residuals (left over from the petroleum refining process and used to produce a fuel), the D.C. Circuit said absolutely not. *Sierra Club v. EPA*, 755 F.3d 968 (D.C. Cir. 2014). In so doing, the Court invalidated EPA's 2008 rule exempting from regulation under RCRA, 42 U.S.C. § 6901, et seq., certain hazardous residuals left over from the petroleum refining process. (The gasification rule.) The Court held that:

> Section 6924(q) is direct and unqualified in its compass. The EPA 'shall' regulate facilities that 'produce a fuel [] from any hazardous waste identified or listed under section 6921,' burn such a fuel, or distribute or market such a fuel. 42 U.S.C. § 6924(q)(1). To drive the provision's comprehensiveness home, Congress not once, not twice, but *eleven* times employed the all-embracing adjective 'any' to describe when hazardous wastes used as a fuel are covered. *See id.* '[Ten] 'any's' in one sentence' and an eleventh a few lines later, 'and it begins to seem that Congress meant the statute to have expansive reach.' *United States v. Clintwood Elkhorn Mining Co.*, 553 U.S. 1, 7, 128 S.Ct. 1511, 170 L.Ed.2d 392 (2008)
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> …
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> The EPA cannot carve out of RCRA one of the very activities that Congress commanded it to regulate. Section 6924(q)'s plain text deprives the EPA of the authority to remove oil-bearing secondary hazardous wastes from RCRA's reach when, through gasification, those materials are used to produce a fuel.

Sierra Club v. EPA, 755 F.3d 968 (D.C. Cir. 2014) citing 42 U.S.C. § 6924(q) and *United States v. Clintwood Elkhorn Mining Co.*, 553 U.S. 1 (2008) (*emphasis in original*).

Siltronic would like EPA and DEQ's assistance in reconciling the evolution in understanding of these wastes in "authorized states" such as Oregon.

3. Consistent Application Of Environmental Regulations Is Needed Not Only Regarding PG&C's Historic Wastes, But Also Regarding Siltronic's TCE Waste.

Siltronic is not interested in increasing the costs of remediation in the Portland Harbor or uplands areas. Rather, Siltronic is focused on sound environmental decision making. It is inconsistent and confusing that DEQ attaches a hazardous waste code of F002 to accidental releases from Siltronic even without certainty whether those releases were spent, recycled, or virgin product, or from other process. DEQ assumes a level of certainty that isn't there. However, when it comes to PG&C wastes, DEQ does not seem to recognize the certainty provided by well-documented historical PG&C reports describing refining, coking, chemical manufacturing activities. Shouldn't industry be entitled to consistent interpretation by the regulatory programs?

Siltronic has successfully treated and removed over 98% of all accidental releases of TCE through in-situ bio-remediation activities. Those activities would have removed all traces of TCE in soil and groundwater but for the dense tarry waste disposed by PG&C which serves to trap some residual TCE. Yet, if even barely measurable quantities of TCE exist within that tarry waste, the entire waste is treated as TCE listed waste F002. Yet, benzene and naphthalene up to 4 orders of magnitude higher than TCE in that same DNAPL is treated as non-hazardous? See Exhibit A, June 10, 2015 Memorandum from Maul Foster Alongi regarding Source Area CVOC Reduction Progress Report.

As a practical matter, in January of 2015 Specialty Analytical labs, analyzed DNAPL from a NWN well on Siltronic property and found small amounts of TCE trapped within the tarry PG&C DNAPL waste. Attached as Exhibit K is a copy of Specialty Analytical's report dated January 21, 2015. As noted above, concentrations of benzene, naphthalene, and other PAHs, were up to 4 orders of magnitude higher than the TCE, yet DEQ seeks only to regulate the DNAPL based on the TCE. It is ironic that the existence of a small amount of TCE subjects the entire waste stream to treatment as F002, but ignores the existence of large quantities of benzene, naphthalene and other petroleum hydrocarbons, as well as cyanide and metals. Given the work done by Siltronic to eliminate the use of TCE in their manufacturing process and the other waste minimization efforts of the company, this seems an odd result. Ultimately, in DEQ controlled uplands, DNAPL in all areas without detectable concentrations of TCE, may be disposed according to EPA policy as a non-waste, non-hazard, by blending and turning it into marine fuel at Thermo Fluids, Inc.[24]

4. There Are Differences Between EPA Statutes And Regulations And Oregon Statutes and Regulations

Oregon did not recognize the "petroleum exclusion" in CERCLA when enacting the Oregon Cleanup statute. Other states similarly have decided to regulate MGP waste under state law including New York, New Jersey, Rhode Island, Pennsylvania, and several others. These states utilize state authorities that are more stringent than federal law as needed to respond to state

[24] NWN (Dost) letter, January, 2016 p.8.

issues. If wastes from NWN and predecessor PG&C were not hazardous, they wouldn't be treated as CERCLA hazardous substances, contribute to the overall risk in the Portland Harbor and be a focus of the remediation efforts needed Harbor wide. To suggest that same waste, in the upland, can be treated differently belies the reality. Use of the term, "substantial product" in the 2009 EPA Joint Order between EPA, NWN, and Siltronic is different than the identifier "free product" used in the CERCLA or RCRA context to denote levels of very high concentration waste. If substantial product is Principal Threat Waste as that term is defined in the NCP and guidance then there should be no need to use a different term here. It is, at best, misleading.

5. Siltronic And NWN Should Both Receive Consistent Application Of Regulatory Decision Making When It Comes To Determining Whether Remediation Waste In Question Is Listed Or Characteristic Waste.

Established EPA regulations and guidance set the standards for determining whether a waste is characteristic or listed. EPA's 1998 guidance, Management of Remediation Waste Under RCRA,[25] provides the standard to apply to determine when contamination is caused by listed or characteristic hazardous waste.

> Where a facility owner/operator makes a good faith effort to determine if a material is a listed hazardous waste but cannot make such a determination because documentation regarding a source of contamination, contaminant, or waste is unavailable or inconclusive, EPA has stated that one may assume the source, contaminant or waste is not listed hazardous waste and, therefore, provided the material in question does not exhibit a characteristic of hazardous waste, RCRA requirements do not apply.[26]

The above standard was incorporated into the final NCP preamble.[27]

Siltronic was afforded no such deference when DEQ determined any accidental releases of TCE at Siltronic were to be managed as F002 listed waste despite uncertainty regarding the process which generated the waste. When TCE was discovered in soil and groundwater at Siltronic, efforts began immediately to determine the source or sources of the release. Over a period of time prior to 2004, Siltronic identified a number of instances where TCE may have been released. All of that information was provided to EPA and DEQ. It was not possible to determine whether the TCE release was "spent solvent" within the hazardous waste listing criteria or hazardous because of its characteristics. Nonetheless, DEQ determined even without

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[25] EPA530-F-98-026 (October 1998).

[26] EPA530-F-98-026 at p. 5.

[27] National Oil and Hazardous Substances Pollution Contingency Plan, 53 Fed. Reg. 51444 (Dec. 21, 1988) (to be codified at 40 C.F.R. pt. 300); National Oil and Hazardous Substances Pollution Contingency Plan 55 Fed. Reg. 8758 (Mar. 8, 1990) (to be codified at 40 C.F.R. pt. 300).

knowing the exact source of the TCE released, Siltronic was to manage all TCE encountered as F002 listed waste. See Exhibit C, February 23, 2004 Memorandum from DEQ.

Siltronic implemented a very successful *in-situ* bio-remediation protocol for upland areas where accidental TCE releases had occurred. Siltronic sought to employ that same successful technology at the Riverbank in 2008, but was not allowed to proceed due to concern the work could interfere with NWN's proposed work. (Letter from Maul Foster Alongi to DEQ regarding DEQ Comments on Siltronic FFS, dated March 6, 2008, attached as Exhibit L.) Now, only TCE which has become trapped in tarry waste from PG&C remains, yet the tarry PG&C waste is not considered hazardous.

In contrast, DEQ has thus far allowed an expansive application of "MGP waste" to include all PG&C activities from 1913 to 1958. If uncertainty exists in favor of less regulatory oversight for NWN actions, shouldn't uncertainty analysis presume a consistent DEQ interpretation for Siltronic when barely detectible levels of TCE remain trapped in PG&C tar, yet benzene and naphthalene levels 4 orders of magnitude higher are unregulated? It would seem a common sense application of RCRA characteristic waste management principles would lead to equally prudent results. There is no need to pick and choose application of RCRA hazardous waste management criteria, listed or characteristic.[28]

If DEQ is unwilling, in the face of uncertainty, to apply listed hazardous waste criteria to PG&C waste generated during remediation, the same standard should be used for Siltronic, and that uncertainty would require TCE encountered to be treated as characteristic and not listed hazardous waste. Siltronic seeks a re-evaluation of the F002 determination and seeks classification of TCE as characteristic and not listed waste in light of questions about the origin of the TCE released at Siltronic and the importance of consistency with the NCP.

DEQ has not yet adopted the new EPA Solid Waste regulations effective at the federal level on July 13, 2015, and is evaluating whether to "grandfather in" all previous permissions – such as PG&C waste determination that DNAPL from the Gasco site can be treated as used oil when extracted from groundwater wells on site. As a result, at present, federal law would prohibit the disposal of DNAPL waste by recycling, unless the recycling facility had a Permit and appropriate regulatory safeguards and frequent air monitoring, and financial assurance mechanisms in place. Moreover, the practice of disposing of used oil as "bunker fuel" has been found to have potentially serious human health and environmental consequences, which may need evaluation.[29] Is the absence of specific regulations prohibiting "sham recycling" another "regulatory loophole" in Oregon effectively making state law less stringent than federal law for

[28] Identification and Listing of Hazardous Waste, 40 C.F.R. pt. 261.

[29] Joan E. Denton, Ph.D, Director of the Office of Environmental Health Hazard Assessment, *Used Oil in Bunker Fuel: A Review of Potential Human Health Implications*, California EPA, December 2004, attached as Exhibit M.

some entities?[30] In an "authorized State" for hazardous waste management, federal law is to be the regulatory floor not the ceiling for environmental protection. Yet at present, EPA is applying more stringent management of Gasco waste in-river than DEQ does in the uplands.

The most inexpensive environmental cleanup is the one that is the most thoughtful and manages risk in a responsible manner at the outset and doesn't simply move the environmental risk to another location. NWN's January 22, 2016 letter to EPA includes information that DNAPL from the Gasco property is reclaimed by Thermo Fluids, Inc. by re-refinement for commercial sale as a bunker or marine fuel. The waste being sent to Thermo Fluids is based on a waste profile assembled by NWN in 2000 and approved by DEQ on February 9, 2000. It may be time to re-evaluate that profile based on new regulatory requirements.

6. Siltronic's Success In Remediating Chlorinated Solvent Impacts Bolsters Its Argument for Reclassification Of TCE Waste From Listed To Characteristic Waste.

Siltronic has been proactively working with EPA and DEQ to advance the investigation and remediation of TCE-related impacts to its property since discovery of these impacts in 2002. Major milestones include initiation of bench testing and evaluation of *in situ* alternatives in 2005; installation of field pilot studies of enhanced *in situ* bioremediation (EIB) in the TCE source area and at the riverbank; completion of the Draft Remedial Investigation report in 2007; completion of a Focused Feasibility Study in 2008; installation of a sustainable and successful EIB in 2009; and volunteering to complete a comprehensive RI of the entire Siltronic property in 2015. These efforts are consistent with Siltronic's corporate sustainability goals and environmental stewardship, which in turn is reflected by over 40 awards and recognitions the Portland facility has received from EPA, Oregon DEQ, and the City of Portland. See Exhibit B.

In 2008, Siltronic completed a Focused Feasibility Study (FFS) for TCE and its degradation products. The recommended alternative, which Siltronic was ready to implement, included installation of EIB at the riverbank and in the source area as the most effective and sustainable remedial alternative for TCE and its degradation products. DEQ subsequently directed Siltronic to revise the FFS to include implementation of groundwater extraction and treatment (a less effective and less sustainable alternative) for source control at the riverbank. When Siltronic subsequently met with DEQ (Jim Anderson) and EPA (Kristine Koch), EPA supported Siltronic's recommendation, but DEQ and EPA determined that implementation in 2009 and demonstration of success could not occur before completion of the Portland Harbor Record of Decision (ROD). Siltronic has subsequently demonstrated successful remediation of TCE and its degradation products in the source area, by removing well over 98% of the TCE, and the ROD is still pending.

Siltronic has allowed construction of a significant source control measure on a portion of its property that primarily treats PG&C impacts, while tolerating significant disruptions to operations and while incurring significant internal oversight costs. Siltronic committed to

[30] 42 U.S.C. §§ 6921-6924; Definition of Solid Waste, 80 Fed. Reg. 1694 (effective for federal implementation July 13, 2015) (to be codified at 40 C.F.R. pts. 260 and 261).

funding a share of the in-river EE/CA, which is almost entirely driven by the presence of PG&C wastes in sediment, groundwater, and transition zone water.

These actions, along with the 15-year history of responsiveness and proactive cooperation with EPA and DEQ, are consistent with Siltronic's environmental goals and commitment to the community as a responsible corporate citizen.

CONCLUSION

For these reasons Siltronic hereby requests that EPA and DEQ provide written clarification regarding the classification of remediation waste from PG&C activities when generated during remediation – regardless of whether that waste is located in river sediments, the riverbank or uplands areas in soil, groundwater or DNAPL. Written responses to the specific questions in the opening of this letter will guide responsible remediation of uplands, riverbank and in-river remediation. In addition, Siltronic seeks consistent application of regulatory requirements with other neighboring property owners. As such, Siltronic requests re-evaluation of TCE classification at Siltronic consistent with the NCP requirement that any uncertainty regarding generation requires waste to be treated as characteristic and not listed waste. As such, in light of NCP requirements, Siltronic requests reclassification of any TCE encountered at Siltronic as D040 characteristic hazardous waste and not F002 listed hazardous waste.

Very truly yours,

Ilene M. Gaekwad

Ilene M. Munk

Enclosures

cc: Myron Burr, Siltronic
Chris Reives, Jordan Ramis
James Peale, MFA
Patty Dost, Pearl Legal Group
Dan Sullivan, Roux Environmental